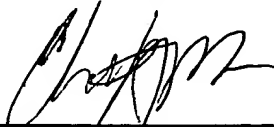


22. (Amended) The use in a fuel cell system of the process as
claimed in claim 1 for the catalytic generation of hydrogen.

IN THE ABSTRACT:

Please add the abstract, which is attached as a separate sheet, to the
application.

Respectfully submitted,



Christopher R. Lewis, Reg. No. 36,201
Attorney for Applicants

CRL/lrb

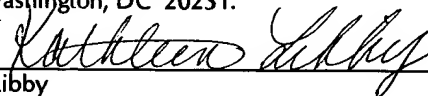
Dated: April 11, 2001

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Kathleen Libby

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ABSTRACT

2, 2

A process for the catalytic generation of hydrogen by the self-sustaining combination of partial oxidation and steam reforming of a hydrocarbon comprises containing a mixture of the hydrocarbon, an oxygen-containing gas and steam with a catalyst comprising rhodium dispersed on a refractory oxide support material which is a mixture of ceria and zirconia. The hydrocarbons are straight chain or branch chain hydrocarbons having 1 to 15 carbon atoms and include methane, propane, butane, hexane, heptane, normal-octane, iso-octane, naphthas, liquefied petroleum gas and reformulated gasoline petrol and diesel fuels. The hydrogen generation process can be started by feeding the hydrocarbon and air to initiate partial oxidation, before steam is added. The hydrogen generation process can be started by feeding the hydrocarbon and air to initiate partial oxidation, before steam is added. The hydrogen generation process also may be operated in combination with a water-gas shift reaction for the reduction of carbon monoxide in the hydrogen generated.

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